



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Large PATENT APPLICATION of

Inventor(s): PESHKIN et al.

Appln. No. 09/781,686

Filed: February 12, 2001

Group Art Unit: 3653

Examiner: Jeffrey A. SHAPIRO

Atty. Dkt: PM /303839 SAT-3019REG
M# / Client Ref.

Title: HUB FOR A MODULAR INTELLIGENT ASSIST SYSTEM

June 27, 2003

**SUBMISSION OF POWER OF ATTORNEY FROM ASSIGNEE
AND REVOCATION OF PRIOR POWERS**


Hon. Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants hereby submit herewith a Power of Attorney from Assignee and
Revocation of Prior Powers for the above-identified application.

Respectfully submitted,

PILLSBURY WINTHROP LLP

By: 
Emily T. Bell
Reg. No. 47,418
Telephone: 703 905-2261
Facsimile: 703 905-2500

P.O. BOX. 10500
McLean, Virginia 22102
703 905-2000

RECEIVED
JUL 03 2003
GROUP 3600

In re PATENT APPLICATION of

Group Art Unit:

3653

Inventor(s): PESHKIN et al.

Examiner:

Jeffrey A. SHAPIRO

Appln. No.: 09/781,686

Atty. Dkt: P 303839 / SAT-3019REG

Filing Date: February 12, 2001

Title: HUB FOR A MODULAR INTELLIGENT ASSIST SYSTEM

**POWER OF ATTORNEY FROM ASSIGNEE
AND REVOCATION OF PRIOR POWERS**

Hon. Commissioner for Patents
P.O. BOX 1450
Alexandria, VA 22313-1450

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JUL 03 2003

GROUP 3600

Sir:

The undersigned, person, whose title is indicated below, is empowered to sign this document on behalf of the assignee of record in the above-entitled patent application. The chain of title from the original owner to the assignee is recorded as follows:

An Assignment from the inventors to Cobotics, Inc. was recorded in the U.S. Patent and Trademark Office on May 10, 2001, under Reel/Frame 011792/0549 (copy enclosed).

A Request for Recordation of Warranty Bill of Sale and Assignment of Contracts, Warranties and Licenses from Cobotics, Inc. to The Stanley Works was filed on April 28, 2003 and a copy is also attached.

The undersigned assignee hereby revokes all previous powers and appoints Pillsbury Winthrop LLP, Intellectual Property Group, P.O. Box 10500, McLean, VA 22102, , telephone (703) 905-2000 (to whom all communications about this application are to be directed), and the below named persons (of the same address), individually and collectively, our attorneys to prosecute this patent application and to transact all business in the Patent and Trademark Office connected therewith and with the resulting patent:

George M. Sirilla	18221	Jeffrey D. Karceski	35914	Thomas Cawley, Jr.	40944
Richard Steinberg	26588	Steven J. Moore	35959	Kerry T. Hartman	41818
Richard H. Zaitlen	27248	Paul L. Sharer	36004	Adam R. Hess	41835
Jonathan E. Jobe, Jr.	28429	Roger S. Joyner	36176	Christine H. McCarthy	41844
Glenn J. Perry	28458	Jack S. Barufka	37087	Henry J. Daley	42459
Dale S. Lazar	28872	Kenneth M. Fagin	37615	Chang H. Kim	42727
Suzanne L. Biggs	30158	Paul T. Bowen	38009	James Menker	42881
Mark G. Paulson	30793	James W. Jakobsen	38505	Anand Sethuraman	43351
Roger R. Wise	31204	Glenn T Barrett	38705	Bryan P. Collins	43560
John R. Wetherell	31678	William P. Atkins	38821	John P. Darling	44482
David H. Jaffer	32243	Brian J. Beatus	38825	Keyvan Davoudian	47520
David A. Jakopin	32995	Thomas P. Hilliard	40330	Eric Hernandez	47641
Caroline D. Dennison	34494	Mark Danielson	40580	Emily T. Bell	47418
Guillermo Baeza	35056	Robert J. Walters	40862		

THE STANLEY WORKS

Assignee

By Kathryn Partridge
Name: Kathryn Partridge
Title: Senior Corporate Counsel
and Assistant Secretary

Date June 23, 2003



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

JULY 31 2001

PTAS
MCDONNELL BOEHNNEN HULBERT & BERGHOFF
GEORGE I. LEE
300 SOUTH WACKER DRIVE, SUITE 3200
CHICAGO, ILLINOIS 60611



101719079A

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 05/10/2001

REEL/FRAME: 011792/0549
NUMBER OF PAGES: 7

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

PESHKIN, MICHAEL A.

DOC DATE: 04/03/2001

ASSIGNOR:

COLGATE, J. EDWARD

DOC DATE: 04/12/2001

ASSIGNOR:

SANTOS-MUNNE, JULIO

DOC DATE: 04/04/2001

ASSIGNOR:

MEER, DAVID

DOC DATE: 04/04/2001

ASSIGNOR:

LIPSEY, JAMES

DOC DATE: 04/04/2001

ASSIGNOR:

WANNASUPHOPRASIT, WITAYA

DOC DATE: 04/09/2001

ASSIGNOR:

KLOSTERMEYER, STEPHEN H.

DOC DATE: 04/04/2001

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JUL 03 2003

GROUP 3600

011792/0549 PAGE 2

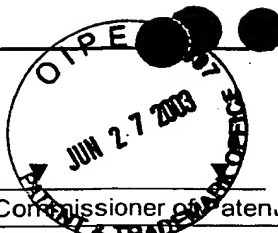
ASSIGNEE:

COBOTICS, INC.
2506 GROSS POINT ROAD
EVANSTON, ILLINOIS 60201

SERIAL NUMBER: 09781686
PATENT NUMBER:

FILING DATE: 02/12/2001
ISSUE DATE:

ALLYSON PURNELL, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS



05-16-2001

cket No.: 98,5

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office



101719079

Tab settings → → →

To the Honorable Commissioner of Patents

Attached original documents or copy thereof.

1. Name of conveying party(ies):

Michael A. Peshkin James Lipsey
J. Edward Colgate Witaya Wannasuphprasit
Julio Santos-Munné Stephen H. Klostermeyer
David Meer

Additional names(s) of conveying party(ies) ☐ Yes ☒ No

3. Nature of conveyance:

5-10-01

- ☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Other

Execution Date: 4/3/01; 4/4/01; 4/9/01; 4/12/01

2. Name and address of receiving party(ies):

Name: Cobotics, Inc.

Address: 2506 Gross Point Road

City: Evanston State/Prov.: IL

Country: USA ZIP: 60201

Additional name(s) & address(es) ☐ Yes ☒ No

4. Application number(s) or registration numbers(s):

If this document is being filed together with a new application, the execution date of the application is:

Patent Application No. Filing date

09/781,686

02/12/01

B. Patent No.(s)

Additional numbers

☐ Yes ☒ No

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JUL 03 2003
GROUP 3600

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: George I. Lee

Registration No. 39,269

Address: McDONNELL BOEHNEN HULBERT

& BERGHOFF

300 South Wacker Drive, Suite 3200

City: Chicago State/Prov.: IL

Country: USA ZIP: 60611

6. Total number of applications and patents involved:

1

7. Total fee (37 CFR 3.41):.....\$ 40.00

- ☒ Enclosed - Any excess or insufficiency should be credited or debited to deposit account
☐ Authorized to be charged to deposit account

8. Deposit account number:

13-2490

400

5/15/2001 DBYRNE 00000125 09781686

DO NOT USE THIS SPACE

1 FC:581

40.00 DP

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

George I. Lee

Name of Person Signing

George I. Lee

Signature

5/4/01

Date

Total number of pages including cover sheet, attachments, and

7

ASSIGNMENT

Case No.: 98,593-E Serial No.: 09/781,686
Inventors: Michael A. Peshkin, J. Edward Colgate, Julio Santos-Munné, David Meer,
James Lipsey, Witaya Wannasuphprasit, Stephen H. Klostermeyer
Date of Execution
of Application: 4/3/01; 4/5/01; 4/9/01; 4/12/01 Filing Date: February 12, 2001

In consideration of One Dollar (\$1.00) and other good and valuable considerations in hand paid, the receipt and sufficiency whereof are hereby acknowledged, the undersigned hereby assign to:

Cobotics, Inc., a corporation of the State of Illinois

its successors and assigns, the entire right, title and interest in the invention or improvements of the undersigned disclosed in an application for Letters Patent of the United States, entitled:

HUB FOR A MODULAR INTELLIGENT ASSIST SYSTEM

and identified as:

Case No. 98,593-E

in the offices of McDONNELL BOEHNNEN HULBERT & BERGHOFF and in said application and any and all other applications, both United States and foreign, which the undersigned may file, either solely or jointly with others, on said invention or improvements, and in any and all Letters Patent of the United States and foreign countries, which may be obtained on any of said applications, and in any reissue or extension of such patents, and further assigns to said assignee the priority right provided by the International Convention.

The undersigned hereby authorize and request the Commissioner of Patents and Trademarks to issue said Letters Patent to said assignee.

The undersigned hereby authorize and request the attorneys of record in said application to insert in this assignment the filing date and serial number of said application when officially known, and the date of execution of the application.

The undersigned warrant themselves to be the owners of the entire right, title and interest in said invention or improvements and to have the right to make this assignment, and further warrant that there are no outstanding prior assignments, licenses, or other encumbrances on the interest herein assigned.

For said considerations the undersigned hereby agree, upon the request and at the expense of said assignee, its successors and assigns, to execute any and all divisional, continuation and substitute applications for said invention or improvements, and any necessary oath, affidavit or declaration relating thereto, and any application for the reissue or extension of any Letters Patent that may be granted upon said application and any and all applications and other documents for Letters Patent in foreign countries on said invention or improvements, that said assignee, its successors or assigns may deem necessary or expedient, and for the said considerations the undersigned authorize said assignee to apply for patents for said invention or improvements in its own name in such countries where such procedure is proper and further agree, upon the request of said assignee, its successors and assigns, to cooperate to the best of the ability of the undersigned with said assignee, its successors and assigns, in any proceedings or transactions involving such applications or patents, including the preparation and execution of preliminary statements, giving and producing evidence, and performing any and all other acts necessary to obtain, maintain and enforce said Letters Patent, both United States and foreign, and vest

all rights therein hereby conveyed in the assignee, its successors and assigns, whereby said Letters Patent will be held and enjoyed by the said assignee, its successors and assigns, to the full end of the term for which said Letters Patent will be granted, as fully and entirely as the same would have been held and enjoyed by the undersigned if this assignment had not been made.

WITNESS my hand and seal this 3 day of APRIL, 2001.



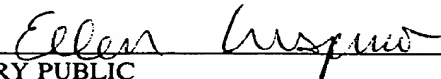
Michael A. Peshkin

State of ILLINOIS

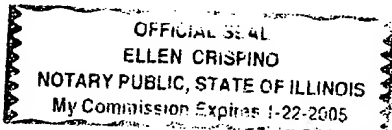
County of COOK

The foregoing instrument was acknowledged before me this 3 day of

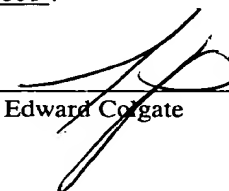
April, 2001 by Michael A. Peshkin



NOTARY PUBLIC



WITNESS my hand and seal this 12th day of April, 2001.




J. Edward Colgate

State of ILLINOIS

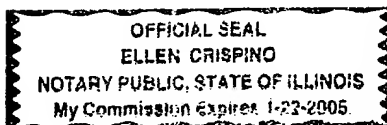
County of COOK

The foregoing instrument was acknowledged before me this 12 day of

April, 2001 by J. Edward Colgate



NOTARY PUBLIC



WITNESS my hand and seal this 4 day of April, 2001.

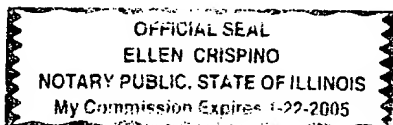
Julio Santos-Munné
Julio Santos-Munné

State of Illinois

County of COOK

The foregoing instrument was acknowledged before me this 4 day of
April, 2001 by Julio Santos-Munné

Ellen Crispino
NOTARY PUBLIC



WITNESS my hand and seal this 4 day of April, 2001.

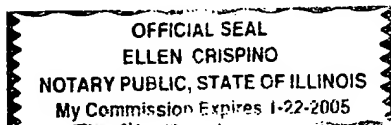
David Meer
David Meer

State of Illinois

County of COOK

The foregoing instrument was acknowledged before me this 4 day of
April, 2001 by David Meer

Ellen Crispino
NOTARY PUBLIC



WITNESS my hand and seal this 4 day of April, 2001.

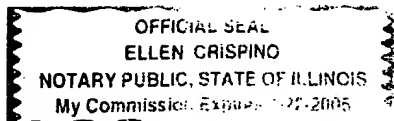
James Lipsey
James Lipsey

State of Illinois

County of COOK

The foregoing instrument was acknowledged before me this 4 day of
April, 2001 by James Lipsey

Ellen Crispino
NOTARY PUBLIC



WITNESS my hand and seal this _____ day of _____, 2001.

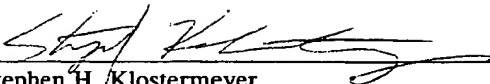
Witaya Wannasuphprasit

Signed at _____

The foregoing instrument was acknowledged before me this _____ day of
_____, 2001 by Witaya Wannasuphprasit

WITNESS

WITNESS my hand and seal this 4 day of April, 2001.

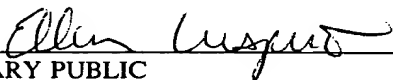


Stephen H. Klostermeyer

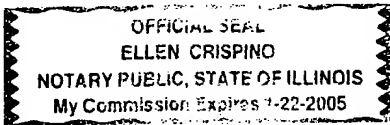
State of Illinois

County of COOK

The foregoing instrument was acknowledged before me this 4 day of
April, 2001 by Stephen H. Klostermeyer



NOTARY PUBLIC



James Lipsey

State of

County of

The foregoing instrument was acknowledged before me this ____ day of

_____, 2001 by James Lipsey

NOTARY PUBLIC

WITNESS my hand and seal this 9 day of April, 2001.

Witaya Wannasuphprasit

Signed at

Chulalongkorn UniversityThe foregoing instrument was acknowledged before me this 9 day ofApril, 2001 by Witaya Wannasuphprasit

WITNESS

VATCHARA LERTIRIYASUWAT

WITNESS my hand and seal this ____ day of _____, 2001.

- 4 -

assignment 98,593-E

RECORDATION FORM COVER SHEET
PATENT APPLICATIONS & PATENTS ONLY

TO THE ASSISTANT COMMISSIONER OF PATENTS AND TRADEMARKS:

SIR: PLEASE RECORD THE ATTACHED ORIGINAL DOCUMENTS OR COPY THEREOF.

1. NAME OF CONVEYING PARTY(IES) (ASSIGNOR(S)):

1. COBOTICS, INC.

3.

5.

7.

2.

4.

6.

8.

ADDITIONAL NAME(S) OF CONVEYING PARTY(IES) ATTACHED? ☐ YES ☒ NO

2. PARTY(IES) (ASSIGNEE(S)) RECEIVING INTEREST:

NAME: THE STANLEY WORKS

ADDRESS: 1000 Stanley Drive, New Britain, Connecticut 06053

ADDITIONAL NAME(S) & ADDRESS(ES) ATTACHED? ☐ YES ☒ NO

3. NATURE OF CONVEYANCE (DOCUMENT):

(Submit herewith only one document for recordation—multiple copies of same Assignment signed by different inventors is one document)☐ ASSIGNMENT OF☐ WHOLE☐ PART INTEREST☐ ORIGINAL☒ FACSIMILE/PHOTOCOPY☐ CHANGE OF NAME☐ VERIFIED TRANSLATION☐ SECURITY ☐ MERGER☒ OTHER: **WARRANTY BILL OF SALE AND SCHEDULE G**

EXEC. DATE: December 13, 2002

EXECUTION DATE(S) ON THE DECLARATION IF FILED HEREWITH: (NOTE: IF DATES ON DECLARATION AND ASSIGNMENT DIFFER SEE ATTY!)

4.5 APPL. NO.(S) OR PAT NO.(S). OTHERS ON ADDITIONAL SHEET(S) attached? ☐ YES ☒ NO

A. PAT. APP. NO.(S) series, code/serial no.	M. MATTER NO.	1. INVENTOR If not in Item 1	B. PATENT NO.(S)	M. MATTER NO.	1. INVENTOR If not in Item 1
09/781,683		PESHKIN et al.	6,241,462		WANNASUPHOPRASIT et al.

5. Name & Address of Party to Whom Correspondence Concerning Document Should be Mailed:

Pillsbury Winthrop LLP
 Intellectual Property Group
 P.O. Box 10500 McLean, VA 22102

6. NUMBER INVOLVED:

APPLNS 6 + PATS 1 = TOTAL = 7

7. AMOUNT OF FEE DUE: (Code 581)

ABOVE TOTAL x \$40 = \$280

5.5 ATTY DKT:

P 007448

8. PLEASE CHARGE TO OUR DEPOSIT ACCOUNT

NUMBER: 03-3975

UNDER ORDER NO

007448

0007448

MATTER NO.

CLIENT REF.

dup. sheet not required

CLIENT NO.

MATTER NO.

9. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

10. Total number of pages including this cover sheet, attachments and document (do not file dup. Cover sheet)

6

Attorney: Jack S. Barufka

Reg. No. 37087

Atty/Sec: JSB/RSP

TEL: (703) 905-2012

Date: April 28, 2003

FAX: (703) 905-2500

FILE WITH PTO RETURN RECEIPT (PAT-103A)

ATTACHMENT ONLY

[illegible]

**WARRANTY BILL OF SALE AND ASSIGNMENT OF CONTRACTS, WARRANTIES
AND LICENSES**

1. Sale and Transfer of Assets and Rights. For good and valuable consideration, the receipt, adequacy and legal sufficiency of which are hereby acknowledged, and as contemplated by Articles II and VI of that certain Asset Purchase Agreement dated as of December 13, 2002 (the "Purchase Agreement"), to which Cobotica, Inc., an Illinois corporation (the "Seller"), and The Stanley Works, a Connecticut corporation (the "Buyer"), are parties, Seller hereby sells, transfers, assigns, conveys, grants and delivers to Buyer, effective as of 5 p.m. Eastern Time on December 30, 2002 (the "Effective Time"), all of Seller's right, title and interest in and to all of the assets (the "Assets") and contract rights ("Rights") described on Schedules A, B, C, D, E, F, G, H and I hereto (collectively, the Assets and the Rights being referred to as the "Transferred Items").

2. Warranty & Further Action. Seller covenants and agrees to warrant and defend the sale, transfer, assignment, conveyance, grant and delivery of the Transferred Items hereby made against all persons whomsoever, to take all steps reasonably necessary to establish the record of Buyer's title to the Transferred Items and, at the request of Buyer, to execute and deliver further instruments of transfer and assignment and take such other action as Buyer may reasonably request to more effectively transfer and assign to and vest in Buyer each of the Transferred Items, all at the sole cost and expense of Seller.

3. Power of Attorney. Without limiting Section 2 hereof, Seller hereby constitutes and appoints Buyer the true and lawful agent and attorney in fact of Seller, with full power of substitution and resubstitution, in whole or in part, in the name and stead of Seller but on behalf and for the benefit of Buyer and its successors and assigns, from time to time:

- (a) to demand, receive and collect any and all of the Transferred Items and to give receipts and releases for and with respect to the same, or any part thereof;
- (b) to institute and prosecute, in the name of Seller or otherwise, any and all proceedings at law, in equity or otherwise, that Buyer or its successors and assigns may deem proper in order to collect or reduce to possession any of the Transferred Items and in order to collect or enforce any claim or right of any kind hereby assigned or transferred, or intended so to be; and
- (c) to do all things legally permissible, required or reasonably deemed by Buyer to be required to recover and collect the Transferred Items and to use Seller's name in such manner as Buyer may reasonably deem necessary for the collection and recovery of same.

Seller hereby declaring that the foregoing powers are coupled with an interest and are and shall be irrevocable by Seller.

4. Terms of the Purchase Agreement. The terms of the Purchase Agreement, including but not limited to Seller's representations, warranties, covenants, agreements and indemnities relating to the Transferred Items, are incorporated herein by this reference. Seller acknowledges and agrees that the representations, warranties, covenants, agreements and indemnities contained in the Purchase

Agreement shall not be superseded hereby but shall remain in full force and effect to the full extent provided therein. In the event of any conflict or inconsistency between the terms of the Purchase Agreement and the terms hereof, the terms of the Purchase Agreement shall govern.

IN WITNESS WHEREOF, Seller has executed this Warranty Bill of Sale and Assignment of Contracts, Warranties and Licenses as of December 30, 2002.

Cobotics, Inc., an Illinois corporation

By:  _____

Its: President _____

SCHEDULE G**INTELLECTUAL PROPERTY**

All of Seller's inventions, improvements, domestic and foreign patents and applications therefore, customer lists, copyrights, copyright registrations and applications therefor, all registrations of and common law rights in trademarks, including "iLift," "iTrolley," "Cobot" and "Cobotics," trade names, brand names, domain names, labels or other trade rights and pending applications therefor, service marks, trade dress, logos, rights in computer software, and all rights granted or retained in licenses under any of the foregoing and all other know-how of the Seller, including but not limited to confidential, secret and/or proprietary information, all technical information, inventions, designs and patents, whether or not patentable, including, but not limited to, the following:

Trademark applications pending on "Cobot", "iLift" and "iTrolley"

The following domain name(s): Cobotics.info, coboticsinc.com, cobotics.org, cobotics.net, cobotics.com, cobot.org, cobot.net, Cobotic.net, Cobotic.com, Cobotics.biz, Cobot.com, Comocoinc.com, Cobotics.co.uk.

Engineer's indexed project notebooks containing trade secret methods.

Patents

1	Issued 7/13/99 5 923,139 08/605,997 98,585 Licensed from NU	Passive Constraint Devices Using Non Holonomic Transmission Elements. (Cobots #1)	Covers the mechanism that we originally called a Cobot and that we now call a "passive Cobot", the use of a computer-steered but otherwise un-powered rolling wheel, used to create virtual surfaces that can be physically perceived by a human user
2	Issued 9/14/99 5 952,788 08/859,357 98,993 Licensed from NU	Cobots #2	Adds to Cobots #1 the ability to add a limited amount of forward driving power to the Cobots otherwise passive motion. Several IAD-100 applications are shown.
3	Filed: 2/8/99 Not issued 09/246,826 98,642 Licensed from NU	Non-Contacting Sensors (Cable Angle Sensor)	Covers the use of a magnetic field emanating from an AC signal carried by a wire rope (or other support member), in order to determine the angle of the wire rope. Useful for IADs to infer which direction and how hard a worker is pushing on a payload. In applications in which the worker is more distant from the payload (e.g. conventional cranes), the cable angle sensor is useful for de-swinging the payload.
4	Filed: 5/7/99 Not issued 09/307,357 98,609 Licensed from NU	Method and Apparatus for Force Sensors	Covers a fixture design for a 2-D axis force sensor appropriate for the human hand and two kinds of readout electronics (magnetic and optical).
5	Filed: 2/9/01 Not issued 09/781,683	System and Architecture for providing a modular	Covers IADs composed of modular parts in communication with one another, and having embedded computational capability. Modules can be lifts, trolleys, user interfaces, etc. Also covers a configuration

	98,593D	Intelligent Assist System	software interface to such IADs, in detail and with variations
6	Filed 2/12/01 Not Issued 08/781,801 98,593C	Modules for use in an Integrated Intelligent Assist System	Covers trolley, hoist, proportional handle, and expansion-interface hub modules as designed by Cobotics, and many engineering variations
7	Filed 2/12/01 Not Issued 08/781,886 98,593E	Hub for a Modular Intelligent Assist System	Covers the main handle and hub that constitute a central interface point in an IAD. The hub is physically near the user (as an intent sensor and as a communication station) and near the tooling (to allow IAD interfacing to the tooling). The hub also provides a communication port to the rest of the IAD and to plant information systems.
8	Filed 5/17/2001 Not Issued 60/291,702 01/636	Intent Sensor for Intelligent Assist Devices	Covers the use of a guidestock that moves with the overhead carriage of an IAD, adjacent to the payload but not connected to it. Can be used for rigid or cable-based systems. Provides intuitive control of payloads and is co-coupled from the mass.
9	Issued 6/5/01 6,241,452 09/357,205 99,453	Method and Apparatus for a High-Performance Hoist	Covers the determination of the mass of a payload that is suspended by a hoist, without requiring the payload to be momentarily at rest. It uses the inertial properties of the payload, not just gravity to determine the mass.
10	Filed 5/18/02 Not Issued PPA 80/378,813 0201-0003	Intelligent Assist Devices for Manipulating Heavy Payloads	Covers a wide array of methods for an operator to maneuver a payload with small physical effort.
11	Filed 10/1/02 Not Issued Not Issued 0201-0005	"Identification and Control Means for Eliminating Instability in Intelligent Assist Devices"	IADs are used in overhead rail structures and with tooling and payloads that are out of the control of the OEM. High performance (responsiveness) and guaranteed stability are generally at odds. This patent covers control methods, algorithms, and software that detect and neutralizes instability so the OEM need not limit performance conservatively.